

ABSTRACT

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A high-purity standard particles production apparatus together with the particles as produced by the same is provided, wherein nanometer-sized high-purity standard particles of wide selectivity in material and monodispersive uniform structure are efficiently produced with the abatement of contamination and damage thereon. The apparatus comprises a particles generation chamber to excite a semiconductor target with pulse laser beam under a low-pressure rare gas ambient so as to desorb and eject materials from the target into the ambient gas, in which those materials are condensed and grow into high-purity particles, a particles classification chamber to subject the high-purity particles as generated to classification and a particles collecting chamber to collect high-purity standard particles as classified onto a substrate.